

ABSTRACT

A method of measuring absolute static pressure in a microfluidic device transporting a working fluid that is immiscible in a first selected gas environment, includes providing a first fluid conducting channel having an atmosphere provided by the first selected gas environment in a sealed environment and in communication with the microfluidic device at a first point of communication; providing a first sensing mechanism that is electrically interrogated, disposed adjacent to the first fluid conducting channel; and transporting the working fluid under pressure conducted by the microfluidic device into the first fluid conducting channel such that the volume transported into such first fluid conducting channel varies depending upon the absolute static pressure of the working fluid.